

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>16963-PCT</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/US 97/ 19935</b>	International filing date (day/month/year) <b>06/11/1997</b>	(Earliest) Priority Date (day/month/year) <b>08/11/1996</b>
Applicant  <b>ST. ELIZABETH'S MEDICAL CENTER OF BOSTON, INC.;</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. ☒ Certain claims were found unsearchable (see Box I).

2. ☐ Unity of invention is lacking (see Box II).

3. ☐ The international application contains disclosure of a **nucleotide and/or amino acid sequence listing** and the international search was carried out on the basis of the sequence listing

☐ filed with the international application.

☐ furnished by the applicant separately from the international application,

☐ but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in the international application as filed.

☐ Transcribed by this Authority

4. With regard to the title, ☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this International Search Report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is:

Figure No. \_\_\_\_\_ ☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 97/19935

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
see FURTHER INFORMATION sheet PCT/ISA/210
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

Remark : Although claims 1-18 are directed to a method of treatment of the human/animal body , the search has been carried out and based on the alleged effects of the composition.

Remark : Although claim 19 is directed to a diagnostic method practised on the human/animal body , the search has been carried out and based on the alleged effects of the composition.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 97/19935

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 A61K48/00 A61K35/12 C12N5/10 A61K47/00 A61K49/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 C12N A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	ASAHARA T. ET AL: "Blood cell derived endothelial cell precursor can participate in angiogenesis in vivo" CIRCULATION, vol. 94, no. 8, 15 October 1996, page 1237 XP002059358 see the whole document	1,3,19, 20
Y	---	2,4-18, 21-23
Y	WO 93 13807 A (UNIV GEORGETOWN) 22 July 1993 see the whole document ---	2,4-18, 21-23
	--- -/-	



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*Z\* document member of the same patent family

Date of the actual completion of the international search

18 March 1998

Date of mailing of the international search report

08.04.98

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Fernandez y Branas, F

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	TAKESHITA S. ET AL: "Gene transfer of naked DNA encoding for three isoforms of vascular endothelial growth factor stimulates collateral development in vivo" LABORATORY INVESTIGATION, vol. 75, no. 4, October 1996, pages 487-501, XP002059359 see the whole document	22,23
Y	---	7,10,11, 13-18
X	ISNER J.M. ET AL: "Cinical evidence of angiogenesis after arterial gene transfer of phVEGF165 in patient with ischaemic limb" LANCET THE, vol. 348, August 1996, LONDON GB, pages 370-374, XP002059360 see the whole document	22,23
X,P	WO 97 12519 A (ST ELIZABETH S MEDICAL CENTER) 10 April 1997 see claims 1-13	22,23
X,P	WO 97 30083 A (NOVARTIS) 21 August 1997 see page 4 - page 5 see page 19, last paragraph see page 20 - page 21	1,20
X,P	ASAHARA T. ET AL: "Isolation of putative progenitor endothelial cells for angiogenesis" SCIENCE, vol. 275, 14 February 1997, LANCASTER, PA US, pages 964-967, XP002059361 see the whole document	1-23
A	ASAHARA T. ET AL: "In vitro evidence for endothelial cell precursors in peripheral blood" CIRCULATION, vol. 94, no. 8, October 1996, page 1102 XP002059362 see the whole document	1-23
A	WO 92 07573 A (SOMATIX THERAPY CORP ;HUGHES HOWARD MED INST (US); WHITEHEAD BIOME) 14 May 1992 see the whole document	1-23
A	WO 89 03875 A (UNIV JEFFERSON) 5 May 1989 --- -/--	1-23

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International Application No

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 96 06933 A (SANDOZ LTD ;NEW ENGLAND DEACONESS HOSPITAL (US); BACH FRITZ H (US)) 7 March 1996 see the whole document -----	1-23

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 97/19935

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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		AU 610292 B	16-05-91
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		EP 0781333 A	02-07-97